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09/830,020	07/19/2001	Werner Anwander	ANWANDER PCT	9321

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EXAMINER

WAKS, JOSEPH

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,020

Applicant(s)

ANWANDER, WERNER

Examiner

Joseph Waks

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35,37-50 and 55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35 and 37-50 is/are rejected.
- 7) ☒ Claim(s) 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 02 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the location of the connections for the coils providing individual accessibility on the stator as recited in claim 42 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The amendment filed on April 2 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the feature of the electric machine being operated with direct current voltage before the pole reversal device and with alternating current voltage after pole reversal device when used as a motor, while alternating current voltage can be tapped before pole reversal device and direct current voltage be tapped after the pole reversal device when the electric machine is used as a generator.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claim 42** and **48-50** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The location of the connections for the coils providing individual accessibility on the stator as recited in claim 42, and the coils formed from several coils being one wire layer thick with connections for individual coils wired to be connected in series and/or parallel and glued together with a heat conductive adhesive as recited in claims 48-50 are not disclosed in the specification and not shown in the drawings.

5. **Claim 42** and **48-50** is also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For the reasons indicated above one skilled in the art would not be able to make and/or use the invention.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claim 42** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term accessible is indefinite, since connections to the coils may be accessible during manufacturing, installation on for maintenance purposes. This limitation is correct for any electric machine having stator coils with outside connections to the external electric system.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 35, 37, 38, 42-45** are rejected under 35 U.S.C. 102(b) as being anticipated by **Lillington et al. (WO 95/03646)**.

Lillington et al. disclose invention as claimed: an electric machine with a rotor containing cylindrical permanent magnets 34 and 36 located tangentially to the circumference of the rotor (Re Figures 1 and 4-6) and attached to the rotor via support elements 30 and 32 in an alternating polarity (Re Figure 7), a coreless stator containing Ω -shaped annular coils 44 having sections extending transversely across a circumference of the rotor and fitted in the stator, each of the section extends on both sides of the rotor enclosing the magnets to a large extent, the pole reversal device (Re Figure 11).

The method of fitting the coils into the stator (individually or otherwise) and forming them around the magnets (i.e. bending) is not pertinent to the patentability of the disclosed structure.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 39-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lillington et al.** in view of **Keim et al. (EP 0751605 A2)**.

Lillington et al. disclose the machine essentially as claimed. However, **Lillington et al.** do not disclose the replaceable magnet support elements.

Keim et al. disclose an electric machine having a rotor 22 furnished with replaceable magnet support elements 30 attached to the rotor by an interlocking facility 44, 46 to be removed in an axial direction, for the purpose of easy installation, repair or replacement of each individual magnet (Re column 3, lines 1-4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the machine as taught by **Lillington et al.** and to provide the replaceable magnet support elements as taught by **Keim et al.** For the purpose of easy installation, repair or replacement of each individual magnet.

12. **Claim 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lillington et al.** in view of **Anwander (DE 3933790 A2)**.

Lillington et al. disclose the machine essentially as claimed. However, **Lillington et al.** do not disclose the several coils and rotors located one behind each other on a common rotor shaft.

Anwander discloses in Figure 11 an electric machine having several coils 113 and rotors 114 located one behind each other on a common rotor shaft 111.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate the number of coils and rotors for the purpose of increasing the output power of the machine without significantly increasing the rotor diameter, since it has been

held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Allowable Subject Matter

13. **Claim 55** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The feature of the cable support provided on the circumference of the rotor-stator assembly, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Response to Arguments

14. Applicant's arguments filed April 2, 2003 have been fully considered but they are not persuasive.

Re drawings, Figure 2 shows the coils individually connected to the pole reversal device 20. However, Figure 2 does not show the coils being individually accessible on the stator as recited in claim 42.

Re claim 35, 37-41, examiner respectfully traversed applicant's presentation of the **Lillington et al.** disclosed structure. Examine directs applicant's attention to Figure 1 showing the permanent magnets 34 and 36 having a circular cross-section and to Figure 7 showing the permanent magnets 10, 12, 14, and 16 being arranged tangentially on the circumference of the rotor having an axis of rotations 20. Moreover, **Lillington et al.** describes in page 4, lines 8-10 that the arrangement of magnets in Figure 7 is representative for all embodiments disclosed by

Lillington et al. Therefore, **Lillington et al.** clearly disclose in Figures 1 and 7 the cylindrical permanent magnets tangentially disposed on the circumference of the rotor as claimed.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
May 22, 2003